

CLAIMS:

1. ~~(Currently Amended) Method of producing a weight-optimized pneumatic tire rim, in the case of which a rim well (1) with rotationally-symmetrically partially different wall thicknesses is produced by means of cold forming from a tube section (1a) preferably produced from a welded tube and is subsequently connected with a rim dish, characterized in that, starting from the two end sides, the wall of the tube section (1a) is in each case changed over a defined rotationally-symmetrical area, which forms a flank (6), while forming a precontour, to a largely precise wall thickness (S2), the tolerance-caused excess material of the flanks (6) being pushed into a well base zone (7) between the two flanks (6), and in that, subsequently the flanks (6) are contoured by pressure rolling while drawing toward the free edge area and are reduced in their thickness (S4, S5), as required, partially differently, to a predefined measurement.~~ A method of producing a weight-optimized pneumatic tire rim having rotationally-symmetrically partially different wall thicknesses, the steps comprising:
providing a tube section having a first wall thickness and two end sides;
leveling the first wall thickness starting from the two end sides over a defined rotationally-symmetrical area thereby forming two flanks by precontouring, each of the flanks having a second wall thickness, and pushing tolerance-caused excess material of the flanks into a well base zone between the two flanks; and
contouring the flanks by pressure rolling while drawing each of the flanks toward an end area of each of the flanks and reducing the thickness of each of the flanks partially differently to predetermined measurements.

2. ~~(Currently Amended) Method~~ The method according to Claim 1, characterized in that, wherein before the leveling of the first wall thickness (S1), the cylindrical tube section (1a) is widened on at least one, preferably both end sidesside.

3. (Currently Amended) Method ~~The method~~ according to ~~one of the preceding~~ claims, characterized in that Claim 1, wherein during the drawing, the flanks (6) are pressed with their faces against a stop ~~(9a)~~.

4. (Currently Amended) Method ~~The method~~ according to ~~one of the preceding~~ claims, characterized in that Claim 1, wherein the precontouring of the flanks (6) and its leveling of the first wall thickness (S1) takes ~~place~~ place by rolling.

5. (Currently Amended) Method ~~The method~~ according to ~~one of the preceding~~ claims, characterized in that Claim 1, wherein the tolerance-caused excess material of the flanks (6) is utilized for a largely uniform thickening of ~~the~~ to form a third wall thickness (S3) of the well base zone ~~(7)~~.

6. (Currently Amended) Method ~~The method~~ according to ~~one of the preceding~~ claims, characterized in that Claim 1, wherein during the drawing of the flanks (6), the rim well (1) is shaped to a final contour.

7. (Currently Amended) Method ~~The method~~ according to ~~one of the preceding~~ claims, characterized in that Claim 1, wherein after ~~their~~ the drawing, the free-end areas of the flanks (6) are finished by shaping ~~rolling~~ rollers.

8. (Currently Amended) Device ~~A device~~ for implementing the method according to Claim 1, characterized in that, ~~for the precontouring of the rim well (1) and the leveling of the wall thickness of the flanks (6);~~ the device including a first tool lining (2) is provided which has having a precontour, a first lining part (3) and a second lining part (4), which can be ~~moved~~ lining parts are movable relative to one another in ~~the~~ an axial direction and whose outer surface areas have a precontour ~~(5)~~.

9. (Currently Amended) ~~Device~~ The device according to Claim 8, characterized ~~in that~~ wherein the largest diameter of the lining parts (3, 4) in the a machining area is larger than the an inside diameter of the ~~at first cylindrical tube section (1a).~~

10. (Currently Amended) ~~Device~~ The device according to Claim 8, characterized ~~in that~~ wherein the precontour (5) is bounded by surrounding stops (9) in the form of an edge.

11. (Currently Amended) ~~Device~~ The device according to ~~one of Claims 8 to 10,~~ characterized ~~in that~~ Claim 8, wherein one of the axially movable lining part (3) ~~or (4) can be moved~~ parts is movable in a spring-loaded manner against the other lining part (3) ~~or (4).~~

12. (Currently Amended) ~~Device~~ The device according to Claim 11, characterized ~~in that another~~ further including a second tool lining (2a) is provided which consists of having a first lining part (3a) and ~~of a~~ second lining part (4a) and which second tool lining, on the a surface area side, has a contour (5a) which corresponds to the a contour of the a finished rim well (1) in the an area of the flanks (6).

13. (Currently Amended) ~~Device~~ The device according to ~~one of Claims 8 to 12,~~ characterized ~~in that~~ Claim 12, wherein the contour (5a) is bounded on the each of its end side sides by one surrounding stop (9a) ~~respectively.~~

14. (Currently Amended) ~~Device~~ The device according to ~~one of Claims 8 to 13,~~ characterized ~~in that~~ Claim 8, further including at least one pressure roller /rolling tool (8) is ~~provided by means of which the tube section (1a) can be~~ is pressed into the precontour (5) ~~or the contour (5a).~~

15. (Currently Amended) ~~Device~~ The device according to ~~one of Claims 8 to 14,~~ characterized ~~in that the~~ Claim 8, further including shaping rollers (10) ~~are provided by means~~

~~of which the end areas of the contoured rim well can be~~are machined.

16. (New) The device according to Claim 12, further including at least one pressure roller by which the tube section is pressed into the contour.

17. (New) The method of Claim 1, wherein the rim well is producing by cold forming.

18. (New) The method of Claim 1, wherein the tube section is cylindrical.